

CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS SYSTEM
maintained by the
CALIFORNIA DEPARTMENT OF FISH AND GAME
and supported by the
CALIFORNIA INTERAGENCY WILDLIFE TASK GROUP
Database Version 8.1 (2005)

R062 Western Terrestrial Garter Snake *Thamnophis elegans*
Family: Natricidae Order: Squamata Class: Reptilia

Written by: S. Morey
Reviewed by: T. Papenfuss
Edited by: R. Duke

DISTRIBUTION, ABUNDANCE, AND SEASONALITY

This often-abundant garter snake is found in the Coast Ranges from the Oregon border south to southern Santa Barbara Co., throughout northern California including the northern Sacramento Valley, and the Sierra Nevada south to southern Tulare Co. Also found in the San Bernardino Mts. of southern California. Associated with permanent or semi-permanent bodies of water in a variety of habitats. Elevation sea level to 3660 m (12,000 ft).

SPECIFIC HABITAT REQUIREMENTS

Feeding: Over much of its range this species feeds on terrestrial prey to a larger degree than the other garter snakes with which it occurs. Small mammals, birds, fishes, frogs, (especially during the metamorphic peak), salamanders, insects, crabs, marine polychaete worms, leeches, earthworms, gastropods (snails and slugs), and even regurgitated gull foods and camper refuse have been listed among the food items taken (Fitch 1941, White and Kolb 1974, Wassersug and Arnold 1976).

Cover: Prefers holes, especially small mammal burrows, crevices, and surface objects. Often basks in the open near cover. In cold areas garter snakes often spend the period of winter inactivity aggregated, sometimes with other species, in fissures, in rocky accumulations, in mammal burrows, or other suitable hibernacula. In milder areas mammal burrows and surface objects such as flat rocks and rotting logs serve as winter refuges.

Reproduction: Courtship and mating normally occur soon after spring emergence. Young are born alive, usually in secluded sites such as under the loose bark of rotting logs or in dense vegetation near pond or stream margins.

Water: No information on water requirements. This species is normally found in the vicinity of permanent or semi-permanent sources of water. Individuals occasionally encountered relatively far from water.

Pattern: Associated with permanent or semi-permanent bodies of water in a variety of habitats.

SPECIES LIFE HISTORY

Activity Patterns: An active diurnal snake. During the warm days of summer most activity occurs during morning and late afternoon. During cooler weather of spring and fall and at higher elevations snakes restrict their activity to the warm afternoons. On warm days during winter, garter snakes have been observed to emerge and bask in the sun at the entrances of hibernacula.

Seasonal Movements/Migration: In cold northern climates red-sided garter snakes (*T. s. parietalis*) are known to make migrations to and from hibernacula where up to 10,000 individuals remain aggregated throughout the fall, winter and early spring (Aleksiuk 1977). It is probable that western terrestrial garter snakes in California make similar migrations at inland montane localities. Elsewhere in the state migration is not expected.

Home Range: The nature of the home range of garter snakes in California is not well known. There is likely considerable overlap in the home ranges of neighboring individuals, as snakes can be located every few meters along suitable shorelines.

Territory: Not thought to be territorial. Although this species is not well studied, other garter snakes have not been observed exhibiting behaviors suggesting territoriality.

Reproduction: Courtship occurs in spring soon after emergence. Seven to 30 young are born in July and August.

Niche: Western terrestrial garter snakes are taken as prey by mammals, birds, and other snakes despite the release of a repulsive musk from the postanal glands of disturbed individuals. Their competitive relationships with other snakes (especially other garter snakes) are not well understood. The range, habitats, and food habits of this species and the common garter snake and the western aquatic garter snake overlap considerably.

REFERENCES

- Aleksiuk, M. 1977. Cold-induced aggregative behavior in the red-sided garter snake (*Thamnophis sirtalis parietalis*). *Herpetologica* 33:98-101.
- Fitch, H. S. 1941. The feeding habits of California garter snakes. *Calif. Dept. Fish and Game* 27:1-32.
- Fitch, H. S. 1983. *Thamnophis elegans*. *Cat. Am. Amphibians and Reptiles* 320.
- Stebbins, R. C. 1985. A field guide to western reptiles and amphibians. 2nd ed., revised. Houghton Mifflin, Boston. 336pp.
- Wassersug, R. J., and S. J. Arnold. 1976. Differential predation on tadpoles, metamorphosing individuals and frogs by garter snakes (Genus *Thamnophis*). *Herpetol. Rev.* 72:101.
- White, M., and J. A. Kolb. 1974. A preliminary study of *Thamnophis* near Sagehen Creek, California. *Copeia* 1974:126-136.